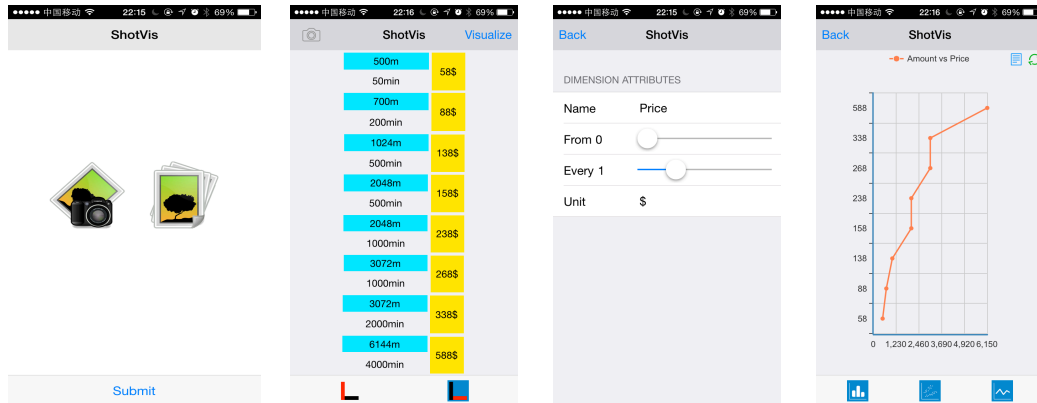


Weekly Report (2014.11.10~11.16)

Done

- 1) ShotVis 项目：本周将 demo 用 Framework7 进行重新包装，使界面更加美观，也便于各位同学工作整合时候的界面风格统一。下图从左往右分别是上传照片页面、数据选择页面、数据属性修改页面和最终的可视结果页面。



- 2) ShotVis 的论文方面,这周写了些内容.由于我看到 TOMM 上面的文章很多都把 related work 部分夹在 introduction 里面,加上我们这个工作相关的工作不是很多,所以我想是不是也仿照这种写法,将 related work 夹在 introduction 里面写。

下面是截图,写得比较粗糙,相关工作还要再加。

主体部分分数据获取(数据来源)、数据整理、数据可视化三块写,重点写第二部分,涉及到交互的设计(帮助用户将自己需要的数据进行指定)及自动算法的加入(比如我之前做的自动隔行选取的操作,主要考虑到减轻用户的工作量,在移动设备上,过多的操作会带来负担)。

Case study 部分介绍几种不同类型数据的处理及可视化过程:

1. 规则的表格数据: Anscombe 数据集,做四组数据分布的对比
2. 不规则的表格数据: 移动话费的表格
3. 文本数据(词云)

User study 部分做对比,突出手机拍照可视化的便捷性及有效性,具体做法还没有想好。

ShotVis: Textual Data Acquisition and Visualization via Smartphones

1. INTRODUCTION

Textual data exists everywhere in our daily life, ranging from books to advertisement. People read and comprehend textual data every now and then. However, it is not easy to accomplish such tasks sometimes, when there are lots of words included or when data is represented by complicated tables.

Meanwhile, Visualization is an useful tool helping people better understand complicated contents. It is thus natural to thinking about leveraging the power of visualization to assist people in the understanding of complicated textual data. Researchers have developed many methods for visualization to make it intuitive and effective. However, it is still not easy for common users to make a visualization to solve their specific problems in daily life.

On the other hand, the number of people who uses smartphones is continually increasing, smartphones have become the most popular devices people would like to take along with. According to the report given by Nielsen Inc.[Nielsen 2014], two-thirds of Americans now have smartphones, and they even spend more time on a smartphone than on a computer. With the increased screen size and computing power of the smartphone, it becomes the ideal platform to realize easy-to-use visualization solutions.

For the issue of visualization on mobile devices, several research efforts have been made. L Chittaro et.al.[Chittaro 2006; Burigat et al. 2006] discussed different aspects of visualizing information on mobile devices, such as how to visualize locations of off-screen objects. HY Yoo et.al.[Yoo and Cheon 2006] proposed different visualization methods for different information types to make them effectively visualized. For instance, sequential layout is suitable for less inter-relation information while radial is more suitable for hierarchical information. Much like the idea proposed in this paper, [Buttussi and Chittaro 2008] and [Kanjoo et al. 2008] both utilize mobile devices to collect data as well as visualize it, they collect and visualize geosensor data and movement data respectively. [Girod et al. 2011] makes use of the camera within mobile phones to capture real world pictures and uses them for searching. This paper will deal with different aspects respect to data acquisition, data processing and visualization of textual data with smartphones. The contributions of this work are summarized as follows.

- Contribution 1.
- Contribution 2.
- Contribution 3.

The rest of the article is organized as follows. We first make a brief introduction of data acquisition in Section 2. Then we elaborate the detailed process of data manipulation to make it fit the intention of users and suitable for visualization. After that, in Section 4, we discuss the smartphone specific visual design. Case study and user study is performed in Section 5 and Section 6 respectively, followed by conclusions and future work in Section 7.

2. DATA ACQUISITION

3. DATA PROCESS

4. VISUALIZATION

5. CASE STUDY

6. USER STUDY

7. CONCLUSIONS AND FUTURE WORK

- 3) 将之前的中文投稿按评审的意见修改了一遍，现在让张老师再帮我看看。
- 4) 由于下周要前往气象局部署气象系统，考虑到 linux 下面部署、维护会方便点，我花了将近两天时间将并行端从 windows 移植到 linux 下，目前编译可以通过但是运行还是会有问题，我也不确定到底多久能弄好。所以暂时先让气象局那边在集群上部署 windows server 系统，这样只需移植 CGI 到 linux 下，会快一点。

To Do

- 1) 去气象局部署气象系统。
- 2) 之后我写个 case study 的详细方案，然后根据设计的方案去改进当前的 demo 讲 case 做出来。